

REMARKS

I. Status of Claims

Claims 24, 26, 28-46, and 48-50 are pending in this application. Claims 24 and 41 are the independent claims and are currently amended. Claims 1-23 were previously canceled. Without waiving any argument and to advance prosecution claims 25, 27, and 47 are currently canceled without prejudice to and/or disclaimer of the subject matter therein.

Claims 24 and 47-49 stand rejected under 35 USC 102(b) as allegedly being clearly anticipated by USP 4,176,213 to van Linden (“van Linden”).

Further, claims 24 and 47-49 stand rejected under 35 USC 102(b) as allegedly being clearly anticipated by German publication DE 196 45 111 (“DE 111”).

Claims 24-30, 32-37, and 45-49 stand rejected under 35 USC 103(a) as allegedly being unpatentable over Applicant’s Admission of Prior Art (“AAPA”)(applicant’s specification at paragraphs [0003]-[0017] and FIGS. 30-31) in view of van Linden.

Claims 24-30, 32-37, and 45-49 stand rejected under 35 USC 103(a) as allegedly being unpatentable over AAPA in view of DE 111.

Claim 38 stands rejected under 35 USC 103(a) as allegedly being unpatentable over AAPA in view of either van Linden or DE 111, as applied to claim 24 above, and in further view of either USP 5,824,199 to Simmons (“Simmons”) or JP 09-092324 (“JP 09-092324”).

Claims 39, 41-43 and 50 stand rejected under 35 USC 103(a) as allegedly being unpatentable over AAPA in view of either van Linden or DE 111, as applied to claim 24 above, and in further view of German document DE 100 49 801 (“DE 100 49 801”).

Claim 40 stands rejected under 35 USC 103(a) as allegedly being unpatentable over AAPA in view of either van Linden or DE 111, as applied to claim 24 above, and in further view of JP 09-092324.

Claim 44 stands rejected under 35 USC 103(a) as allegedly being unpatentable over AAPA in view of either van Linden or DE 111 in view of German document DE 100 49 801, as applied to claim 41 above, and in further view of USP Publication No. 2002/0187382 to Nishiumi (“Nishiumi”).

The Applicant respectfully requests reconsideration of these rejections in view of the foregoing amendments and the following remarks.

II. Remarks Regarding 35 USC § 102/103 Rejections of claims 24 and 41¹

Independent claim 24 stands rejected under 35 USC 102(b) as allegedly clearly anticipated by van Linden and DE 111. Further independent claim 24 stands rejected under 35 USC 103(a) as allegedly being unpatentable over AAPA in view of van Linden, or AAPA in view of DE 111. Further, claim 41 stands rejected under 35 USC 103(a) as allegedly being unpatentable over AAPA in view of either van Linden or DE 111, as applied to claim 24, and in further view of DE 100 49 801.

The Applicant respectfully submit that claim 24 is patentable over the cited references at least because it recites, *inter alia*, "...wherein an elastic member is provided between an external surface of each multi-cell module assembly of the plurality of multi-cell modules and an internal surface of the first wall..." and "...the multi-cell module assembly elastically adheres to the first wall by the elastic member...."

Similarly, the Applicant respectfully submit that claim 41 is patentable over the cited references at least because it recites, *inter alia*, "...the multi-cell module assembly is elastically supported by the module frame...."

Certain embodiments of the present invention provide a fuel cell assembly capable of preventing disassembly of a cell stack by preventing modules adjacent to an end portion of the cell stack from sliding upon an impact of an acceleration in a direction perpendicular to the cell stacking direction. Further, certain embodiments of the present invention provide a fuel cell assembly capable of avoiding the sticking of a cell adjacent to an end portion of the cell stack onto an external restrainer member if such a member is provided. In order to do so, a fuel cell

¹ Without waiving any argument, and to advance prosecution, claims 24 and 41 are amended to incorporate subject matter generally tracking claim 27, which is now canceled without prejudice to and/or disclaimer of the subject matter therein. It is noted that *claim 27 was not addressed in the final Office Action dated January 12, 2010.*

assembly includes a plurality of multi-cell modules disposed in series, and an external member. Each multi-cell module has a multi-cell assembly formed by stacking a plurality of cells. As shown in FIG. 1 of the application, each multi-cell assembly is elastically (by deformable adhesive members 45) adhered to a module frame along a stacking direction. Each module frame has a first wall that surrounds the multi-cell assembly and that extends in a cell stacking direction of the multi-cell assembly (and optionally a second wall that extends perpendicular to the cell stacking direction). The multi-cell assembly is adhered to the first wall. The external member extends outside the plurality of multi-cell modules and in the cell stacking direction along the multi-cell modules. Also, an external restrainer member is provided between an internal surface of the external member and external surfaces of the first walls of the module frames of the plurality of multi-cell modules. *See* paragraphs [0020]-[0022] and [0096] of the application as published (US Pat. Pub. 2006/0177722).

Accordingly, at least a portion of the lateral force of an impact that occurs on the multi-cell assemblies is transferred to the first walls, and is received from the first walls by the external member via the external restrainer member. *See* paragraph [0119] of the application as published.

For instance, according to the example of claim 24 of the present invention, thermal expansion differences occur between the cells 19 and the first wall 43 can be relieved due to the elastic member 45. *See* paragraph [0097] of the application as published, which states:

[0097] While each cell 19 produces heat from its power generating portion, the first wall 43 does not produce heat but is affected by ambient temperature via the external member 24. Therefore, thermal expansion differences occur between the cells 19 and the first wall 43. Such thermal expansion differences can be relieved owing to the provision of spaces between the cells 19 and the first wall 43 or the provision of deformable adhesive members 45 in the spaces. It is to be noted that adjacent multi-cell modules 40 are provided with an intervening space extending in the cell stacking direction between the first walls 43 and between the adhesive members 45 so that the adhesive members 45 can freely thermally expand or deform in the cell stacking direction and therefore can deform in directions perpendicular to the cell stacking direction.

Further, because each multi-cell module assembly (40) of the plurality of multi-cell modules is not restrained by the module frame (42) in the cell stacking direction, differences in the thermal expansion in the cell stacking direction between the multi-cell assemblies (41) and the module frames (42) will not cause breakage of cells (19). *See paragraph [0109] of the application as published which states:*

[0109] Since the multi-cell assemblies 41 of the multi-cell modules 40 are not restrained in the cell stacking direction by the module frames 42, differences in the thermal expansion in the cell stacking direction between the multi-cell assemblies 41 and the module frames 42 will not cause breakage of cells 19.

With respect to van Linden and DE 111, these references at least do not disclose that *an elastic member (45) is provided between an external surface of each multi-cell module assembly (40) of the plurality of multi-cell modules and an internal surface of the first wall (43)*, and the multi-cell module assembly (40) is elastically adhered to the first wall and/or is elastically supported by the module frame (as required by the inventions of claims 24 and 41).

For example, pipes 11a, 13a, 10a of van Linden do not equate to the external restrainer of the present invention at least because they do not contact member 1. Even if 11a is a pipe and 4a is a first wall, which is not so admitted, van Linden still does not have the external restrainer of certain embodiments of the present invention. Further, van Linden shows only one multi-cell module, but not a plurality of multi-cell modules as required by the inventions of claims 24 and 41.

With respect to DE 111, the Office Action alleges that element 4i or 7 of this reference is a module frame having a first wall. However, as shown in FIG. 1 of DE 111, the element 7 seems to be a filling material between a casing 13 and the cell stack and the element 4i is referring to the screw element between cells stacks. DE 111 does not show a multi-cell module assembly elastically adhered to the first wall and/or elastically supported by the module frame.

Even if the member 7 of DE 111 equates to an external restrainer, which is not so admitted, it still does not disclose “*an elastic member (45) [that] is provided between an external surface of each multi-cell module assembly (40) of the plurality of multi-cell modules and an*

internal surface of the first wall” as required by the invention of claim 24 and/or “[a] multi-cell module assembly (40) [that] is elastically supported to the module frame” as required by the invention of claim 41.

Having said that, if the Examiner maintains the rejection under DE 111, the Applicant respectfully requests the Examiner provide an English translation of this reference. *See MPEP § 706.02 (“If the document is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the examiner is relying upon in support of the rejection.”).*

Thus, lacking any teaching and/or suggestion of each and every limitation of the inventions of claims 24 and 41, the Applicant respectfully submits that the cited references do not anticipate the same. The Applicant respectfully submits that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Moreover, the other cited references do not cure the deficiencies of van Linden and/or DE 111.

For example, with respect to AAPA, this reference discloses a tension plate 24 (an external member); however, AAPA does not disclose an external restrainer and a first wall as recited in the invention of claim 24 and/or a multi-cell module assembly elastically supported by the module frame as recited in the invention of claim 41.

Accordingly, it would not have been obvious to modify van Linden and/or DE 111 in the manner as claimed in the inventions of claims 24 and 41. As discussed in MPEP 2143.01, obviousness can *only* be established by combining or modifying the *teachings of the prior art* to produce the claimed invention where there is some *teaching, suggestion, or motivation* to do so. *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006) (discussing rationale underlying the motivation-suggestion-teaching *>test< as a guard against using hindsight in an obviousness analysis).

Further, as discussed in *KSR Int'l Co. v. Teleflex, et al.*, No. 04-1350, (U.S. Apr. 30, 2007), it remains necessary to identify the reason why a person of ordinary skill in the art would have been prompted to modify any of the cited references in the manner as recited in the

inventions of claims 24 and 41. Obviousness cannot be sustained on mere conclusory statements.

Therefore, for at least these reasons, it is respectfully submitted that claims 24 and 41, as well as any of their dependent claims, are patentable over the cited references.

Accordingly, based on the foregoing, the Applicant respectfully submits that claims 24, 26, 28-46, and 48-50 are patentable over the cited references.

III. Conclusion

In light of the above discussion, the Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4420 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

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